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A rare sighting of the Eastern Pygmy-possum *Cercartetus nanus* in north-central Victoria

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Abstract

The Eastern Pygmy-possum *Cercartetus nanus* is a small, omnivorous marsupial found in south-eastern Australia. In Victoria, the present distribution of *C. nanus* is geographically patchy, generally associated with forests of the Great Dividing Range, but also a range of coastal forests and shrublands. In Box-Ironbark forests of north-central Victoria, *C. nanus* appears to have undergone a severe population decline. In April 2011, a single Eastern Pygmy-possum was observed in the Redcastle-Graytown State Forest during nocturnal survey work. This is a notable record considering that the species has not otherwise been reported from this area for approximately 40 years. (*The Victorian Naturalist* 130 (1) 2013, 40–44)

Keywords: mammal, Box-Ironbark Forest, Redcastle-Graytown State Forest, Heathcote-Graytown National Park.

Introduction

The Eastern Pygmy-possum *Cercartetus nanus* is a small (~17–42 g), omnivorous marsupial of south-eastern Australia (Harris 2008). Its geographic range extends from south-eastern South Australia, through Victoria and New South Wales, to south-eastern Queensland (Ward 1990; Harris *et al* 2007; Menkhorst and Knight 2011); and also includes Tasmania (Harris *et al* 2008). The main threats to the conservation of *C. nanus* are reported to be inappropriate fire regimes resulting in a reduction of the shrub layer, habitat loss, and introduced predators (Harris 2008). The conservation

status of the species is listed as vulnerable in New South Wales (New South Wales Government 2012) and South Australia (Government of South Australia 2011). In Victoria, it is not listed as being threatened, although concerns have been expressed about its status (Harris and Goldingay 2005; Harris 2008; Department of Sustainability and Environment 2010).

Cercartetus nanus is considered to be a mid-storey specialist, occurring in a range of vegetation types such as rainforest, sclerophyll forest, shrubland, heathland and woodland (Harris 2008). It is commonly associated with a dense

understorey of *Banksia*, or other shrub species, that provide its main food source of nectar and pollen (Menkhorst 1995; Harris 2008). *C. nanus* finds shelter in tree hollows, stumps, *Xanthorrhoea* skirts and occasionally in disused bird nests (Menkhorst 1995; Harris and Goldingay 2005).

In Victoria, *C. nanus* has a widespread but patchy distribution, occurring in the Portland area in the south-west of the state, the Grampians, the Otway Ranges and the forests of the Great Dividing Range from Ballarat to the north-east of the state (Fig. 1). Its distribution also extends along the south-eastern coastline

from Wilson's Promontory to East Gippsland (Fig. 1) (Menkhorst 1995; Harris and Goldingay 2005).

Recent records of *C. nanus* from the dry Box-Ironbark forests of north-central Victoria have been scarce (Fig. 2), and Menkhorst (1995) suggested that the species may have suffered a severe decline due to a reduction in shrub species associated with intensive management of these forests. The most recent records of *C. nanus* in the Heathcote-Graytown National Park and Redcastle-Graytown State Forest (Fig. 3), east of Bendigo, appear to be prior to 1970 (Fig. 2) (Museum Victoria 2002).

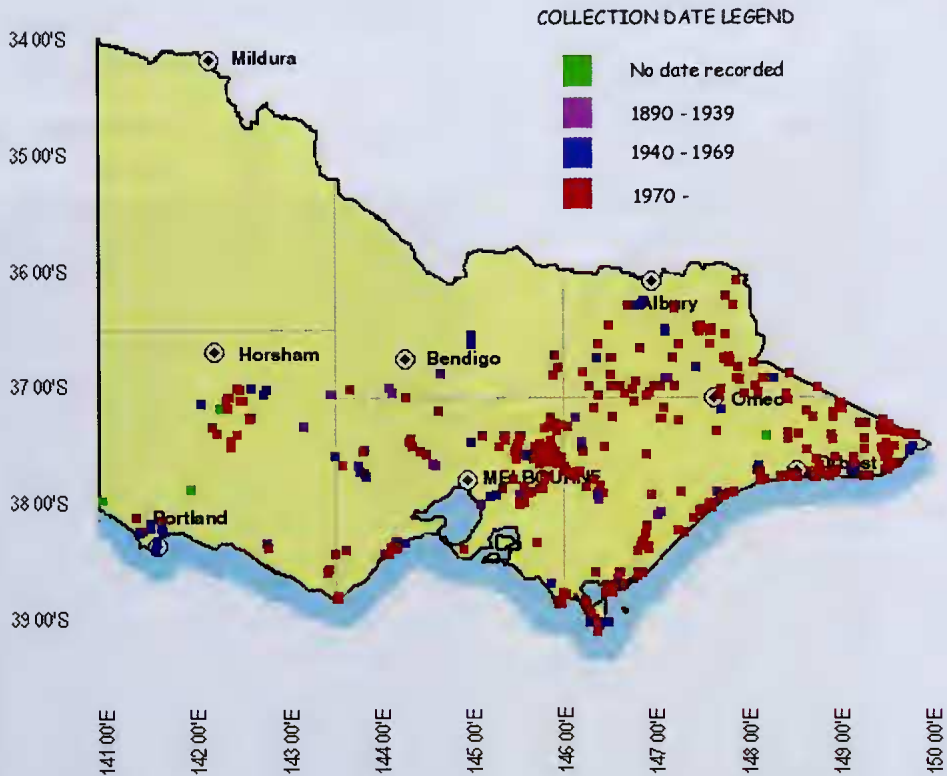


Fig. 1. Distributional records of the Eastern Pygmy-possum *Cercartetus nanus* across Victoria. (source: Museum Victoria 2002).

An observation of *Cercartetus nanus* in Box-Ironbark forest

A study of the ecological effects of prescribed burning in Box-Ironbark forests of the Heathcote-Graytown National Park and Redcastle-Graytown State Forest (an area of approximately 40 000 ha) in north-central Victoria, commenced in 2010 (Bennett *et al.* 2012). This study is examining the effect of prescribed burning on the flora, fauna and structural habitat features, including a study of the Yellow-footed Antechinus *Antechinus flavipes*. As part of the study of *A. flavipes*, approximately 8500 trap-nights of survey effort with small Elliott traps (with peanut butter, oats and honey baits), 7350 camera trap nights with similar baits, and 58 nights of radio telemetry have been performed.

On 12 April 2011, four days after a prescribed burn treatment, two researchers from Deakin University were radio tracking individuals of *A. flavipes* within the recently burnt area. At 8.20 pm, a small animal was spotted on the ground. On closer inspection, the animal started bounding across the ground and climbed to a height of around 1.5 m on a small (2–3 m tall), dead sapling. The animal was observed for approximately 5 minutes, allowing photographs to be taken and identification of the small mammal as *C. nanus* (Fig. 4).

This individual was observed within a study area approximately 100 ha in size within the forest. The overstorey is dominated by Red Ironbark *Eucalyptus tricarpa* L.A.S. Johnson, with Grey Box *E. microcarpa* Maiden, Red Stringybark *E. macrorhyncha* F.Muell. ex Benth.

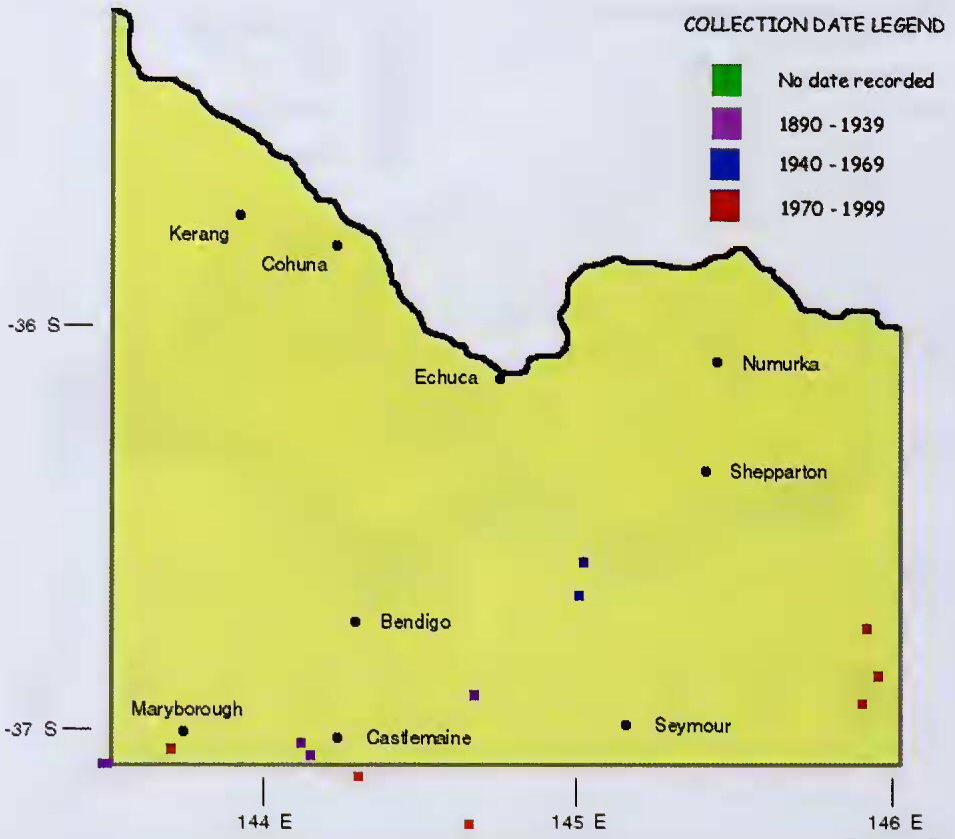


Fig. 2. Distributional records of the Eastern Pygmy-possum *Cercartetus nanus* across north-central Victoria (source: Museum Victoria 2002).



Fig. 3. Regional locality map of north-central Victoria highlighting Heathcote-Graytown National Park, Redcastle-Graytown State Forest and adjoining public land.



Fig. 4. Eastern Pygmy-possum *Cercartetus nanus* sighted in the Redcastle-Graytown State Forest, April 2011. (Photo by Anna Flanagan)

and Red Box *E. polyanthemos* Schauer also present. These overstorey trees have an average diameter of 20–30 cm. Mid-storey and shrub species such as Golden Wattle *Acacia pycnantha* Benth., Grass Tree *Xanthorrhoea glauca* subsp. *angustifolia* D.J.Bedford, Sweet Bursaria *Bursaria spinosa* Cav. and Drooping Cassinia *Cassinia arcuata* R.Br. also occur in this area.

Conclusion

This sighting of a single *C. nanus* in Redcastle-Graytown State Forest is significant as it confirms the continued presence of the species in this area, despite it not having been recorded here for at least 40 years. The lack of other recent records during the current surveys, despite extensive small mammal trapping, camera trapping and radio telemetry undertaken in the area, suggests that the size of the present population of *C. nanus* is small.

Other methods for detecting this species, such as the use of nest boxes, pitfall trapping and analysis of predator scats (Bennett *et al.* 1989; Bladon *et al.* 2002; Harris and Goldingay 2005; Harris 2008), may also be useful in gaining additional records in these forests. The deployment of nest boxes developed particularly for this species may be a useful management

strategy to assist with recovery and monitoring of *C. nanus* in this area (e.g. Bladon *et al.* 2002).

The confirmation of the ongoing presence of *C. nanus* in these Box-Ironbark forests of central Victoria is noteworthy, and needs to be considered in developing wildlife management strategies for the region.

Acknowledgements

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Ninety-seven Years Ago

'POSSUMS. — "F.R." in "Bush Notes" in the *Australasian* of 24th June, has some remarks on the food of 'possums in captivity. He says that in their wild state it was obviously impossible for 'possums to obtain cooked meat, yet in confinement they will eat it freely. Again, before the advent of the white man fruit was practically non-existent in Australian forests; yet a neighbour, who has a choice garden containing some fine apple-trees, finds that as soon as the apples begin to ripen the 'possums begin to arrive, though no one would suspect that there were any of the animals in the neighbourhood. They are very fond of apples, and will also eat peaches and other fruits, while potatoes and other vegetables are also favoured. In another friend's garden the buds of a La France rose were continually disappearing, the cause being put down to snails, but it was afterwards found that 'possums were the cause, and "F.R." says in his own garden they will leave everything else for a rosebud. Cooked meat, he remarks, seems to have irresistible attractions for many wild things. Cockatoos and parrots are very fond of it, yet, of course, they could not possibly have tasted it in their wild state. There is no accounting for these aberrations, and apparently these strange articles of diet do them no harm—in fact, they seem to thrive on them. Cake and sugar are common articles of diet with tame 'possums. These must be very different from the meals of gum-leaves that formed their natural food. No doubt they also eat grass in their native state, but their staple food is undoubtedly the young shoots and leaves of the various eucalypts.

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